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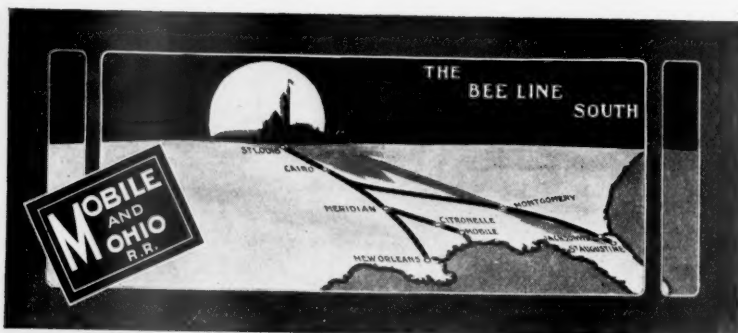
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Certificates and Diplomas Honored.

Dr. J. W. Stearns, of the University of Wisconsin, pointed out some years ago that one of the commendable features of teachers' agencies is the fact that they facilitate the movement of teachers among the states and, therefore, tend to prevent that species of dry rot or stagnation that comes from provincialism. In these days many teachers have college or normal

school diplomas, or state certificates, and since a large and increasing number of these teachers with high-grade qualifications keep enrolled in the teachers' agency, it will interest a large number of our readers to know what credit is given in the way of certification in each of the states to holders of diplomas and certificates from other states.

In the states not named in the following list no provision is made by law for honoring certificates or diplomas from other states. Yet as a fact of practical administration such papers may, and usually do, receive recognition in an extra legal manner. This is generally true in those states in which local or county administration prevails unhampered by state restrictions and red tape. To illustrate: Suppose a teacher of ample and unquestioned scholarship coming from another state and holding a diploma from, say Harvard or Michigan University, or from some first-class state normal school, or a life state certificate, should be chosen by an Illinois school board. One way to qualify would be to apply to the county superintendent for certification. Now, if the county superintendent should happen to be a young bud recently elevated to office, he may examine Mr. Harvard and Miss Ann Arbor to find out whether they can spell syzygy, give the longitude, capital and population of Samoa, find the product of the G. C. D. of the square root of nine-tenths and the L. C. M. of the first seven prime members, define a compound objective complement of the third class, etc., all of which he has a perfect legal right to do; and he may even persuade himself that the thing which he calls his conscience will not al-

low him to do otherwise. But not many men or women of that pattern get elected as county superintendent. Usually the officer is a discreet person of good judgment. Even a smart Aleck sometimes develops good sense after he has been in office long enough to wear off the wire edge. In nine cases out of ten a teacher qualified as above noted will receive a first grade certificate without examination, provided he does not ask for it.

The states and territories that extend by law the courtesy of recognition to professional teachers in other states are as follows:

ARIZONA. Certificates of other states and diplomas from institutions of learning are honored, provided those papers entitle the holder to teach in the states where they were granted.

CALIFORNIA. State papers from other states, and from certain institutions of learning are recognized to a limited extent. Papers from other states and state institutions are honored for county certificates.

INDIANA. Papers from other states may be honored by the state superintendent.

INDIAN TERRITORY. Papers of prominent colleges and state normal schools are recognized.

KANSAS. State papers are honored if equal in requirements to the requirements for state papers in Kansas, and also the diplomas of accredited institutions of learning outside of the state, on examination, except in professional subjects.

MINNESOTA. State certificates may be granted without examination, to the holders of college and university diplomas which are the equals of those granted by the University of Minnesota, after the applicant has taught successfully one year on a Minnesota first grade county certificate. Only diplomas from state normal schools equal in rank to those of Minnesota are honored.

MONTANA. Papers from other states may be honored, at the discretion of the board.

NEBRASKA. College papers of certain classes are honored, but state certificates from other states are not. The county superintendent may, at his discretion, honor papers from other states.

NEVADA. Papers of other states and of various institutions of learning are honored. In granting county certificates no papers are honored except life diplomas of other states and state normal school diplomas.

NEW JERSEY. The papers of states which honor the state papers and state normal school diplomas of New Jersey are honored in that state. Certain grades of college diplomas are honored in the granting of county certificates.

NEW YORK. Life certificates of other states may be endorsed by the state superintendent, provided they are the equivalent of New York papers and that the states in which they are granted honor New York papers.

NORTH DAKOTA. State normal school diplomas, and the diplomas of high-class universities are honored.

OKLAHOMA. Certain university and other high-class diplomas exempt the applicant from examination.

OREGON. Certain state papers are honored, but the diplomas of state institutions of learning are not honored unless the holders have taken an examination before the state authorities of the state in which they were graduated, in order to secure them.

PENNSYLVANIA. Papers from other states may be honored by the state superintendent under such regulations as he may make. Graduates of leading institutions of learning may be grafted permanent certificates after teaching three years in Pennsylvania.

RHODE ISLAND. Papers of other states are honored.

SOUTH CAROLINA. State certificates are not honored, but college diplomas are, both for state and county certification.

SOUTH DAKOTA. State papers of other states are not honored, but diplomas of state normal schools and colleges of high grade are.

UTAH. High-class certificates from other states and from high-class institutions of learning may be honored by the state board of education.

VERMONT. State certificates are not honored, but certain diplomas are, both for state and county certification.

VIRGINIA. Papers of states and state institutions are honored, provided papers of Virginia are honored in the states where such papers are issued.

WASHINGTON. State certificates of all states, the requirements to obtain which are not inferior to the requirements to obtain similar papers in Washington; also the diplomas of state normal schools and diplomas from institutions of learning not inferior to the University of Washington or to the state normal schools of Washington, are honored.

WISCONSIN. Diplomas from colleges approved by the board of examiners, also diplomas of state normal schools of equal rank with Wisconsin normal schools, are honored, and when countersigned by the state superintendent become life state certificates.

WYOMING. In county examinations papers from other states and from reputable institutions of learning are honored.

A Fight Over the Schools in New York.

School matters in New York state are in a bad way. The state department of education seems to have developed into a big political machine which the school people are now trying to break. Consequently Superintendent Skinner is having rough sailing. Moreover, he seems likely to suffer shipwreck. Legislation is pending which, if enacted, will greatly curtail the state superintendent's power

and vest greater authority in the university regents. Mr. Bardeen of the School Bulletin favors this reform legislation, and the bouquets he is throwing at Mr. Skinner contain more thorns than roses. Those who remember Mr. Skinner's administration of the affairs of the N. E. A. in 1897 when the famous ring of patriots was at the height of its power, will appreciate the following characterization by Mr. Bardeen which appears in the School Bulletin:

Mr. Skinner is big, clumsy, sentimental, vacillating; following impulses instead of purposes, obeying the whim of to-day rather than the promise of yesterday, more accustomed to shedding tears in public than to continuous thought in private. Surrounded by men a good deal brighter than himself, not one of whom is personally loyal to him, he is often suspicious where he ought to be trustful and trustful where he ought to be suspicious. Conscious of his mental inferiority, he never gives his subordinates a free rein, but often interferes for the sake of interference, to keep it in mind that he is politically at the head, and thus leaves every head of a department in uncertainty as to what may be depended on. If we add to this a certain bull element in his nature—a disposition to be on the lookout for red cloth and to rush at it blindly and suicidally, we have summed up his distinctive weaknesses.

Among other shortcomings Mr. Bardeen mentions a "loaferish tendency to side against the teacher," and mentions a case in which Mr. Skinner decided that by vote of the board the teachers of a high school may be compelled to sign a diploma even when they protest that the student has not done the work which the diploma certifies. Charges of gross extravagance are made; also that Mr. Skinner has tried to build up a big political machine out of the school organization.

There seems to be little doubt among those who are well informed that Mr. Skinner's administration is tottering to its fall. A keen and fearless writer like Mr. Bardeen speaking to the school peo-

ple of the state through such a forceful medium as the School Bulletin is an element of opposition that a state superintendent cannot withstand unless his administration is above serious reproach.

An Attorney for the Defense.

Former State Superintendent Harvey, of Wisconsin, in a local school journal writing on "The Institute—Some Evils Observed," opens with a defense of the institute work in Wisconsin as conducted for the past four years, and uses as a text the statement, "The main purpose of all institute work is to develop teaching and training power." Then he proceeds to give a rather interesting, though highly colored, picture of a certain sort of alleged institute work which he says has been known in Wisconsin and is to be found "in many other states."

With Mr. Harvey's main thesis or text quoted above probably no one would take issue. The only question is how shall the work be done so as most effectually to promote that end. During his administration Mr. Harvey seemed to assume that there is only one way in which this end can be accomplished, namely, by training the teachers by a process of drill which sought to impart a definite and detailed body of knowledge. But the acquisition of knowledge is not necessarily a development of power.

Henry Ward Beecher said the church is a good means of promoting virtue, but it could not be made a means of training in virtue, and he illustrated the point in this way: The preacher may *teach* effectively, but the *training* must be obtained in actual life experience. A sermon on honesty, for example, may be a good teaching exercise, but the training in honesty is obtained in one's actual experience in life. It would be absurd, he said, for the preacher to undertake to *train* a congregation in honesty. "Imagine," he said, "a performance of this kind: The minister say: 'All arise.

Hands in your neighbor's pockets. Hands out of neighbor's pockets. Show hands.'"

May it not be possible to inspire, instruct and teach an institute so that the desired growth in teaching power will come in the actual schoolroom work of those who catch the true spirit of teaching from the institute instruction? And who shall say that there is only one routine method of accomplishing this end?

We believe that if Mr. Harvey should observe the institutes in a wider field he would find that the best work is done in a great variety of ways depending on the personality of the instructors, and that those who are fitted by native endowment and adequate preparation to teach effectively in the institutes are at their best when unhampered by detailed prescription as to method. And it might not be amiss to admit that possibly the system in vogue in Wisconsin for the past four years is susceptible of improvement. Certainly there are a great many people in the state who believe that it can be improved and who will heartily welcome a change.

There is no reason to expect a rash, ill-judged or iconoclastic revolution in the institute work under the present administration. If the present system is so nearly perfect as some of its defenders have professed to believe, it should be its own best advocate and not need an attorney for the defense. How it is regarded by many of the rank and file of the teachers is indicated by the following from a letter which is typical of the opinions expressed by many others to the editor of this journal. The writer of the letter, a wide-awake, progressive teacher, whose name is withheld because the letter is private, said, referring to the position of this journal on the institute problem: "You are right about the institutes; since Mr. Harvey enforced his pet hobby they have been life extinguishers."

English Universities vs. American.

In his remarks at the banquet of the Chicago Alumni Association of the University of Michigan, President Angell stated that in his opinion Cecil Rhodes might better have left his money to bring English students to American universities, rather than to send young Americans to Oxford. He stated that he believed the time is arriving when American students who go abroad to Germany and to England will pass on the way a crowd of young Europeans who are coming over here to study with us. We teach many branches which are not considered at all essential in England. At Oxford, for instance, the sciences are not taught at all. When such vast sums, both from private benefaction and government appropriation, are being devoted to education in this country, it seems that the universities of America must soon take their place among the first universities of the world.

Men, Women, Girls, and Boys.

In the public school nomenclature used in reports, etc., Chicago will no longer have lady teachers; they will be women. This is a praiseworthy reform. In Wisconsin and a few other states "female teachers" is a designation still in use even in official reports, and people who would be shocked if one should speak of a "he teacher," a "she teacher," a "female Eskimo" or a "buck nigger," yet seem not to be sensible of any wrenching of the proprieties in the use of "female teacher," "male pupil," etc., just as a scientist uses the terms in designating the sex distinction in monkeys, parrots, butterflies or grasshoppers.

In states and communities where the dictates of good taste prevail it is found that the human family can be classified even in school reports under the four heads, men, women, boys and girls.

The Institute.

S. Y. GILLAN, CONDUCTOR.

Review Exercises in Elementary Grammar.*

J. N. PATRICK, A. M., ST. LOUIS, MO.

EXERCISE XIII.

VERBALS.

On account of their two-fold nature and manifold uses, verbals are regarded as the most difficult subject treated in grammar. It must be remembered that an infinitive is a verb-noun, a participle is a verb-adjective. These forms are nouns and adjectives derived from verbs. They are not verbs, because they do not assert anything. An infinitive expresses in noun-form the act that the verb asserts. Ex. He *gives*; expresses an assertion, but the action itself is expressed by the phrasal infinitive *to give* or by the participial infinitive *giving*. It is clear that *to give* and *giving* are the names of actions, hence they are nouns.

A participle has the signification of a verb, but the construction of an adjective. Ex. We found him *lying* on the ground. *Lying* has the signification of a verb, but is used like an adjective. We will now illustrate the most important uses of these two derivative words.

Infinitives. The infinitive or verb-noun has three forms. (1) The form without the sign *to*, as I *work*. (2) The phrasal form with the sign *to*; as, *To work* is a duty. (3) The form in *ing*; as, *Working* is honorable.

The phrasal infinitive may be used to complete the meaning of nouns, adjectives, verbs, and adverbs. In these uses it may be regarded as a complimentary infinitive and parsed or construed as a unit. It is the complement to the word it limits.

Mary came *to see* us.
He rejoiced *to hear* of it.
Give me something *to eat*.
Henry has a fine horse *to sell*.
She was glad *to see* you.
He is ready *to start*.

John was not strong enough *to lift* it.
He came too late *to catch* the train.

The phrasal infinitive, preceded by a noun or a pronoun in the objective case, forms with the noun, or the pronoun a substantive phrase. The whole group may be regarded as the object of the verb, or the noun or the pronoun may be regarded as the grammatical object and the infinitive as a complementary infinitive.

EXAMPLES.

- (1) He invited John to come.
- (2) I asked him to go.

In (1) *John to come* is the logical object. *John* the grammatical object; *to go* the complementary infinitive. In (2) *him to go* is the logical object; *to go* the complementary infinitive.

- (3) I want him to be good.

To be joins the adjective *good* to *him*, the word which the adjective limits.

- (4) I wish him to become a lawyer.

To become joins the noun *lawyer* to the pronoun *him* with which it is in apposition. Logically the analysis is complete when we see that *I* is the subject, *wish*, the verb, *him to become a lawyer*, the object.

- (5) He appears to be contented.

To be contented is the complement of the copulative verb *appears*. *Contented* is used as a predicate adjective, joined to *he* by *appears to be*.

- (6) He desires me to be fashionable.

To be joins *fashionable* to the pronoun *me*, the word which *fashionable* limits. Or regard *to be* as the complementary infinitive limiting *me*.

- (7) We are about to close this lesson.

The infinitive phrase, *to close this lesson*, is the object of the preposition *about*.

- (8) It is profitable to read good books.

The infinitive phrase, *to read good books*, is the logical subject of the sentence, *it* being merely representative.

The infinitive noun in *ing* may be limited by a noun or a pronoun in the possessive case; as, I was surprised at *John's* being absent. I have no faith in *his* keeping his promise. It may be used wholly as a noun with *the* preceding and *of* following it; as, *The reading of the verdict* required an hour.

PARTICIPLES.—The participle, or verb adjective, as a verb expresses action, as an adjective it limits a noun or its equivalent. A few examples should make these facts clear.

(1) Seeing the boy fall, I picked him up.

Seeing is used as an adjective and as a verb. As an adjective it modifies *I*; as a verb it takes the object *boy*.

(2) I saw a man walking in the garden.

Walking is used as an adjective and a verb; as an adjective it limits *man*; as a verb it is modified by the adverbial phrase *in the garden*.

(3) I felt my heart beating faster.

Beating is the objective complement modifying heart. *Faster* tells how his heart beats, hence it is an adverb of manner.

(4) I saw a man walking in the meadow.

Walking is used as an adjective and a verb. As an adjective it limits *man*; as a verb it is modified by the adverbial phrase, *in the meadow*.

The possessive case should be used with the participle where possession is denoted. Examples, "There is no question in regard to Mr. Lowe's having received a majority of the votes." Not, "There is no question in regard to Mr. Lowe having received a majority of the votes."

The present participle is used in the progressive form of the verb, as, The farmer *is plowing* the field; the past participle in the perfect form of the verb; as, The farmer *had plowed* the field; the passive participle in the passive form of the verb; as, The field *was plowed* by the farmer.

NOTE.—Verbals do not have definite tense signification. They show the act as indefinite, progressive, or perfected. They assert action in a general way without limiting the action to any time, or asserting it of any subject. They express tense as present, past, or future relatively to the time of the principal verb.

In order to distinguish the present participle from the participial infinitive, the infinitive ending in *ing*, we must remember that the former is used in the sense of an adjective, the latter in the

sense of a noun; as, (1.) *People living in cities often long for the quiet of a country home.* (2.) *He finds no pleasure in living.*

In sentence (1) *living* is used as an adjective; in sentence (2) *living* is used as a noun. Use, not form, determines the part of speech to which a word belongs in a given sentence.

Easy Lessons in Science.

PROF. C. P. SINNOTT, STATE NORMAL SCHOOL,
BRIDGEWATER, MASS.

FRICTIONAL ELECTRICITY.

(1) *Production.* Balance a yard stick or any light, wooden rod upon the end of an egg resting in the mouth of a bottle. Bring an ordinary rubber comb near one end of the rod, holding it just to one side. It will have no effect upon the rod. Now

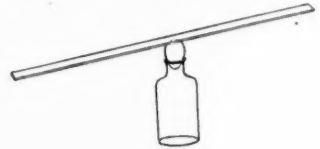


Fig. 34.

rub the comb vigorously with a piece of warm, dry flannel and bring it near the rod again. It will be attracted by the comb and will swing about upon the egg as a pivot. It is evident that it takes force to move the rod and that this force is exerted by the comb after rubbing it with flannel but not *before*. This force is called *frictional electricity* because it is produced by friction. Substitute a warm, dry glass chimney for the comb and a piece of silk for the flannel. Repeat the experiment with the rod. Similar results will follow. We say that the comb and lamp chimney have been electrified. This experiment may be varied by bringing the electrified rubber or glass near to bits of paper, parched corn or bits of pith from corn stalks or common elder stems. Devise other simple experiments to show the same thing. Try a stick of sealingwax or a varnished wooden penholder in place of

the comb. A strip of hard rubber about eight inches in length and one inch wide will be more convenient than a comb if it can be easily obtained. A piece of silk ribbon, rubbed between flannels will be attracted by and held firmly against the wall of the room.

(2) *How manifested?* All these experiments thus far show the force to be attractive. If, however, a pith ball be suspended by a silk thread and brought near to an electrified lamp chimney or piece of rubber it will be first attracted but after contact will be repelled, thus showing that the force is both *attractive* and *repellent*.

(3) *Kinds.* Electrify a piece of rubber and place it in a paper stirrup suspended by a silk thread. Electrify a seer. Attraction at pended piece of rubber bring it near the sus- Electrify the glass and Repulsion takes place. bring it near the first. the same manner and ond piece of rubber in once takes place. It would therefore appear that the electricity on the glass is in some way different from that on the rubber. We call electricity like that on the glass *positive* and like that on the rubber *negative*.

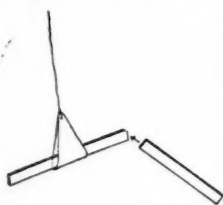


Fig. 35.

(4) *Law.* It is evident that the two pieces of rubber were similarly electrified and that the rubber and glass were dissimilarly electrified. The experiment may now be repeated by placing an electrified glass in the stirrup, and approaching it first with electrified rubber. These experiments should show that *bodies similarly electrified repel each other and bodies dissimilarly electrified attract each other*, and this may be remembered as a law. Lay a sheet of fools-cap paper upon a warm, dry board as you would if you were to make a tassel from the sheet. Now rub the paper vigorously with a piece of

warm flannel, lift the sheet from the board and notice that the strips repel each other. Apply the law in explaining this.*

(5) *The Electroscope.* The bits of paper, the pith balls and the balanced rod are used to detect the presence of electricity and may, therefore, be called electroscopes. A very delicate and convenient electroscope may be made as follows: Pass a copper or brass wire vertically through a rubber cork and upon the upper end of the wire solder a metal

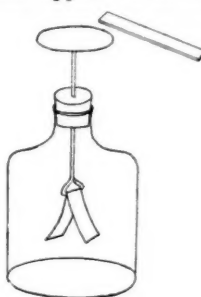


Fig. 36.

disc at its middle point, one and a half or two inches in diameter. A cent would do very well but would be better if a little larger. Bend the lower end of the wire so as to form a stirrup. Over this hang a

strip of tin foil about a quarter of an inch wide and to each side of the foil stick a strip of aluminum, gold or silver leaf, the same width as the foil and about one and a half or two inches long. This metal leaf can generally be procured at a painter's, but if not conveniently obtained, substitute for it the very lightest quality of tissue paper, the paper having first been soaked in salt water, dried and pressed. Fit the cork into a clear glass bottle four or five inches wide and allow the leaves to extend nearly to the bottom. When an electrified body is brought near the metal disc the leaves will be made to diverge. This instrument, as will be shown later on, can be used to detect, not only the presence, but the kind of electricity in a body. It is called the gold leaf electroscope.

(6) *Conduction.* To the metal disc of the electroscope attach a piece of wire, five or six feet in length. Attach the free end of the wire to a piece of metal plate of any kind and rest this plate upon a bot-

tle, being sure that the wire does not come in contact with anything except the electroscope and metal plate. Touch the plate with the electrified rubber or glass and observe that the leaves at once diverge. We are therefore led to the conclusion that the electricity has been conducted along the wire to the electroscope, and we say that the wire is a *good conductor* of electricity. Substitute dry silk for the wire, repeat experiment and observe that the leaves do not diverge. Silk, therefore, is not a good conductor but a *non-conductor*.

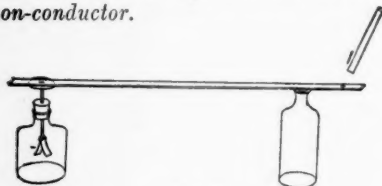


Fig. 38.

Thoroughly moisten the silk by putting it into a glass of water, repeat the experiment and notice that the leaves now diverge, thus showing that water is a conductor. Substitute a dry rod of wood for the silk and hold the electrified body for a minute or more against the end of the rod. The leaves will finally, but not promptly, diverge thus showing that the wood is a poor conductor. Moisten the rod and repeat. Try several other substances in the same way to determine whether or not they are conductors. Instead of supporting the metal upon the bottle, as in the above experiment, hold the plate in the hand and bring an electrified body in contact with it. The leaves do not diverge. Can you explain why? Why was the bottle used in the experiment and what might have been substituted for it? Can you see any possible explanation for the fact that a piece of metal cannot be electrified in the same way that the rubber and glass were? When an electrified body rests upon a non-conductor, its electricity cannot escape and the body is said to be *insulated*, the non-conductor being called on *insulator*.

Cleanliness in School.

The following circular was distributed among the teachers in the public schools in Providence, and similar but briefer rules distributed among the children. Boards of health in other cities have distributed similar circulars calling attention to unsanitary habits, the correction of which requires constant vigilance:

The poisons of some of the common and also of some of the most loathsome diseases are frequently contained in the mouth. In such cases anything which is moistened by the saliva of the infected person may, if it touches the lips of another, convey disease. The more direct the contact the greater the danger.

It is the purpose of health officials to keep in isolation all persons having communicable diseases during the time that they are infectious. But in many cases this is impossible. Little restraint is put on certain mild diseases, such as measles, whooping cough, chicken pox and mumps, and even such diseases as diphtheria, scarlet fever and tuberculosis are frequently so mild as to be unnoticed, and children affected with them mingle freely with others. It is probable that in such cases one of the chief vehicles of contagion is the secretion of the mouth and nose. It is believed that much can be done to prevent contagion by teaching habits of cleanliness. But if such instruction is to be effectual it must be continuous. The teacher must notice and correct violations of those rules as habitually as the violations of the more formal school rules are corrected.

Even if the question of disease and contagion did not enter into the matter at all the subject ought to be given more attention by teachers. Our schools should not only teach reading, writing, and arithmetic, but it is perhaps quite as important that they should inculcate cleanliness, decency, refinement and manners. Cleanliness ought to be taught for its own sake, even if it had no relation whatever to health.

Teach the children not to spit; it is rarely necessary. To spit on a slate, floor or sidewalk is an abomination.

Not to put the fingers in the mouth.

Not to pick the nose.

Not to wet the finger with saliva in turning the leaves of books.

Not to put pencils into the mouth or moisten them with the lips.

Not to put money into the mouth.

Not to put pins into the mouth.

Not to put anything into the mouth except food and drink.

Not to *swap* apple cores, candy, and chewing gum, half eaten food, whistles, or bean-blowers, or anything that is habitually put in the mouth.

Teach the children to wash the hands and face often. See that they keep them clean. If a child is taken down with a communicable disease it is reasonable to believe that there is less chance of infecting persons and things if the hands and face are washed clean and not daubed with the secretions of the nose and mouth.

Teach the children to turn the face aside when coughing and sneezing, if they are facing another person.

Children should be taught that their bodies are their own private possessions, that personal cleanliness is a duty, that the mouth is for eating and speaking and should not be used as a pocket, and the lips should not take the place of fingers.

Institute Notes.

BY S. Y. G.

OREGON AND WASHINGTON.

The traveler from the middle West who goes to the Pacific coast by the Canadian Pacific railway gets a full appreciation of the vast extent of the great plain sloping so gradually toward the mountains as to seem a continuous level. From St. Paul two days and a night are required for the train to reach the mountains, and about half this journey is through a region of wheat land of great fertility. And even hundreds of miles to the north of this line is a vast area of fertile country which is fast becoming occupied. At Banff the mountain scenery begins, and for the next forty-eight hours the passenger is treated to a continual variety of views, the finest to be found anywhere, culminating at Glacier House, a famous summer resort within a half hour's walk of a glacier which is one of the greatest

in the world. The next morning the train spins down the Frazer River Canon, a grandly rugged gorge which is the gateway to the lower and level country around Puget Sound. On Canadian Pacific trains one feels a greater security than on most American roads. The schedule time is not fast, and great care is used in the running of trains as is shown by the small number of accidents that occur. There is less of the "Go ahead" spirit, but more of the "All right."

The shore line of Puget Sound is long enough to reach from New York to Kansas City, so sinuous is the coast; the Sound is a great harbor free from shoals, sand-bars or rocks, and never freezes. The largest ocean vessels load and unload in the very heart of the city of Tacoma within two blocks of the city hall and the principal business street.

At Tacoma the writer addressed the teachers of that city—about a hundred and fifty people who can see a point without having it diagrammed or explained. The schools of Tacoma are now in charge of Superintendent A. B. Warner, formerly of Iowa, and it is an evidence of practical wisdom on the part of the school board of that city that when they needed an educational expert and leader they knew what means to employ, and found him although he was then two thousand miles away and in a small city. When I saw Mr. Warner in Tacoma he had been in charge there only a few months, but it was already clearly evident that the schools were under skillful leadership.

From Tacoma to Portland and on up the Willamette valley to the head of that river does not seem far, as one sees it on the map of the United States, but it is a journey of about 500 miles. Jackson county is bounded on the south by California and is in a region where industries are diversified. Gold mining, fruit raising, farming and grazing all claim attention. These lines of business offer a constant inducement to young men, consequently a

very large percentage of the teachers are women. At the institute held here nearly every teacher in the county was present the first morning and remained till adjournment the last day. The same thing can be said of each of the six Oregon institutes included in this circuit, and probably of all the others in the state, a fact which is accounted for by the legal provision which entitles a district to five dollars from the state fund in case the teacher attends the institute regularly.

A noteworthy and laudable spirit of kindly good-fellowship and cordial hospitality pervades the north Pacific coast both among the teachers and other citizens. Prosperous and successful clubs with commodious and well furnished club rooms are more common and in towns much smaller than those which usually support such organizations on the hither side of the great divide, and "the latch-string was out." In Dallas and in Mc-Minnville the business and professional men have club rooms that would be a credit to cities of twice their size, and the leading school men are active members.

The spirit of fellowship and mutual good will, and the absence of narrow jealousy is seen in the way county superintendents in the Willamette* valley co-operate to promote common educational interests. Superintendents Daley, Littlefield, Starr, Moores and Jackson joined in a sort of institute club and fixed their dates, programs and arrangements for lectures, etc., making a harmonious unit for institute purposes out of the five counties.

State Superintendent Ackerman was present in nearly all these institutes, not as a visitor or "inspector," but as a regular worker. If he did any "inspecting" of the formal sort it escaped my

notice. He gave his effort to inspiring and instructing the teachers, and after seeing his unassuming and kindly, yet straightforward and businesslike attitude toward teachers and other citizens for several weeks in as many counties, it was not difficult to understand why he was re-elected last summer by an unusually large majority, although at the same time the opposite party elected the head of the ticket. Being a worker, a teacher and a democrat (with a small d) he received the support of the educational people with practical unanimity.

Truth Versus Lies.*

Whenever you go back to the earlier forms of life you find truth strangely lacking. The cunningest fox, the craftiest coon, is the one that receives the highest reward, that survives in the struggle for existence. At most, you find the animal telling the truth to its mate and its young. The charm of Uncle Remus's stories is due to the fact that the rabbit, the least crafty of animals, is put in a position where he can outwit Bre'r B'ar and Bre'r Fox. The stories of Ernest Seton Thompson take us into a world where deceit is the highest form of virtue.

Do children lie? Yes, constantly, persistently, and universally. A child does not tell the truth, because he cannot. He does not know the truth, his approximation to the truth is very much vaguer than ours, and there are certain qualities of his mind which make it inevitable that he should pervert the truth. In the first place, truth is synonymous with knowledge. He does not know what truth is. He has not yet come to a plane where he can think truly, not even to our plane. His moment of thought is fragmentary; he deals with little bits. A child was told the story of "Peter, the Goose." The story runs that a little girl named Alice had a tame goose. Her mother told her

* Willamette is not pronounced Wil-la-met. If geographic names should be pronounced as they are spoken by the natives, then the first vowel in this word should not have the sharp sound as in *will*, but an obscure sound, almost short *u*. The second vowel is like *a* in father, and receives the accent, Wul-ah-met.

* From a lecture on moral development of children, by Dr. Earl Barnes, from the Kindergarten Magazine.

that when she went out of the yard to roll her hoop she should close the gate. But Alice forgot to do this and the goose wandered out. Tom came along with his dog, which chased the goose and caught it. But Alice got the goose away from the dog and carried it home. This child, in illustrating the story, drew a picture of Alice and Tom, two pictures of the hoop, and two of the dog, but none of the goose, although the story was of "Peter the Goose." This shows the fragmentary nature of the child's knowledge. The pictures drawn were absurdly untrue to life.

In the second place (and it is the same with us) the child gradually approximates the truth. Children have their ideas of truth. We speak the truth to our friends and the false to our enemies. When I was a boy, if I said, "Hope to die if I didn't tell the truth," or something of that sort, I felt more sure of getting a better article than if I didn't take such a precaution. It is something mediaeval and primitive. The child has a feeling that it is worse to lie to his mother than to a stranger. It is the same thing which makes difficulty in the police courts, where the authorities have to watch the ignorant witness to prevent him from kissing his thumb instead of kissing the book with the idea of escaping the penalties that would follow if he kissed the Bible.

In the third place, the child's imagination drives him often to tell what is not true. Joan of Arc and other child prophets are illustrations. This imagination drives them to every form of perversion of the truth. The child has an imaginary companion. She knocks on the bars of the gate and leads the imaginary companion into the house. They have a party. When the cakes come around the child takes a cake, through the little girl. The child, of course, must do everything for the little girl, and so she eats her cake for her. The next morning her mother

finds her tooth brush out in the garden. When the child is questioned about it she says the little girl took it out there to brush her dolls curls. If you want to read a story on this point, read "Sentimental Tommy," by Barrie. In the second volume you come to the almost inevitable conclusion. Was Sentimental Tommy a liar? In the same way that all children are. As a boy, his vivid imagination came into play.

The first difficulty—that which comes through lack of knowledge—must be met by education. Nothing else will help us out. The child must be brought constantly into contact with palpable truth and made to feel its existence! This other disorder must be met by the most subtle education. Stamp out the imagination and you have a being unfit for the relations of social life. Somewhere in the process there should be the child's imaginative vision.

In the fourth place, you have egotism as a source of untruthfulness. One lies because he wants to get into the background. In the one case he lies because he is a bravo; in the other case, because he is a coward. A boy in school was made to stand on the floor because he had written a love letter to one of the little girls. He got some paris green, carried it to school, and took it there. Doubtless every one of us with any imagination has lingered over the thought of some dramatic ending of our life which would bring us for once conspicuously before the community.

Contagion is the fifth cause. In the sixteenth century one hundred thousand people were put to death for witchcraft. I have looked over with some care the records in regard to witchcraft, both in Germany and in America. The singular thing is that a great many of these people were children, and nearly all the witnesses were children, generally girls from twelve to fourteen years old. The chil-

dren's crusades are another illustration of the same thing. Children lie over and over again under the contagion of ideas. All the community is talking about witches and what they have done. Some one, perhaps, hints that a certain old one is a little peculiar. The rumor grows by continued repetition and the added imagination until it grows into definiteness and becomes a conviction. That is the way with a lot of the church quarrels and squabbles.

The sixth cause of children's lies is selfishness—they want something.

If I am right in my treatment of lies, if it is true that we are growing up from deceit to a franker transparency, then we must expect to find people all along the line. If a child misrepresents the truth it is a secondary symptom; it is because he is timid and afraid, perhaps; you whip him, and he is more timid than before. It is because he is a bravo and wants to show off; you stand him on the floor; he has exactly what he wants. He misrepresents the facts of life; you punish him and thereby introduce more difficulty into the understanding of the facts of life than before. In every case of lying you have an indirect symptom, and what you want is to get back to the right thing.

A skillful German kindergartner had in her classes a little girl whose mother was devoted to her. The child had made some misrepresentations. She was punished and brought back into the fold. She did it again, with the same consequences. After several months the misrepresentation was repeated. The mother brought the child back and told her she wanted her to apologize to the teacher. The child did so. The mother said she had prayed over it and worked over it. She had looked very severe until the child begged her not to do so, and she would never be untruthful any more. She has wrought it into the child's fabric until she has spoiled the child. Let a colt you are training shy at a post or a newspaper, and

he is bound to do it every time he comes upon it. He has got the shy in him, and it is only with the greatest difficulty it can be worked out. If through misunderstanding of the child's nature you work a shy into his system, you run him off the track. It would have been much better for the mother to keep her loving mother relations to the child than to undertake this severe correction.

A mother was one day entertaining friends, when her son rushed in and exclaimed, "Mamma, Teddy said——" and he repeated the words. The mother replied, "Very well, run out and play." Some of her visitors were surprised at her treatment of the matter, and asked why she let him go with such an impression in his mind. His mother replied, "The impression is not in his mind. If I had rubbed it into his mind it would have staid; probably by night he will have forgotten it."

If the child lies because it is selfish, then it is a simple problem; in any other cases you must treat the matter indirectly. We have some subjects who never will tell the truth if they can avoid it. They are on that plane of development. The difference between your telling a lie and the child's telling a lie is the difference between a million and two.

Another of Bardeen's Fables.

(This is No. 661 of the Bulletin Series.)

A teacher who neglected everything, who was often late at school, was always behind the schedule with her classes, and never by any chance got in a report on time, had exhausted the patience of the superintendent by her shiftless excuses.

"By the way," he said, "I have been thinking this morning of the story of old Job Corey, who had the distinction of being the laziest man in Groton. He wouldn't work, his neighbors got tired of supporting him, and finally they decided to bury him. He was too indifferent to

make any objection, so they put him in a coffin and started with him for the grave yard.

"On the way a neighbor met them. 'Why, whom are you carrying in the coffin?' he asked.

"'Job Corey.'

"'I didn't know he was dead.'

"'He isn't, but we are tired of supporting him.'

"'Oh, it's too bad to bury a man alive; take him home; I'll give him a bushel of corn myself.'

"Job heard and leaned up on one elbow, so that his head lifted the coffin lid.

"'Shelled?' he asked, listlessly.

"'Why no.'

"'Go ahead, boys,' said Job, lying down again, and the procession moved on."

"I don't see much point to that story," said the teacher. "They couldn't bury a person alive; it's against the law."

"I wish it wasn't," said the superintendent, turning on his heel.

This fable shows that it is not worth while to scatter parables before snails.

Up or Down?

PROF. GEO. C. SHUTTS, STATE NORMAL, WHITE-WATER, WIS.

Shall I sit or stand in conducting a recitation?

That depends upon circumstances. It depends upon the effect the position has upon the receptivity of the pupils and upon the kind of activity demanded of them.

The first essential of a recitation is a receptive state of mind on the part of the pupils of the class; not a passive state, but a condition of open-mindedness, an attitude of interested expectancy. If the teacher meets them as a friend who is in sympathy with them they are apt to assume a receptive attitude toward the work of the recitation. If the class is not too large this condition can usually be more easily attained by the teacher's drawing the class in a circle about her, all sitting.

This goes a long way toward putting the children at ease, a condition essential if the whole mind be brought to bear upon the work.

If the recitation is one calling for exercise of thought power the conditions essential to deliberative thought must be observed, if good results would follow. The teacher quietly sitting, alert for any emergency, is much more conducive to the true aim of the recitation than if standing or vigorously tramping about, perhaps gesticulating with a desire to urge on the thought of the pupils.

If the recitation is for training in skill, one element of which is rapidity, the standing position is more conducive to the aim. Vigorous action on the pupil's part is demanded, hence an aggressive attitude on the part of the teacher will be more likely to produce that end.

In a drill exercise one must drive and usually drive hard. The pupils should return to their seats aglow with vigorous exercise. To accomplish this, vigorous action is demanded of the teacher; action inconsistent with a sitting position. If the class is large the teacher may in any case have to stand to see every face. If the teacher fears his ability to govern, he must stand, or perhaps lose control. But that teacher with large reserve power, who knows when to rise for emphasis or action and when to sit to get into sympathy with the pupils or to encourage deliberative thought, is of more value to a school than one who makes it a rule in the recitation to remain standing, and such a teacher will reach the close of the day with less waste in the expenditure of energy.

I make no defense, however, for the shiftless teacher who by "sitting on his shoulder blades" during recitation, possibly with his feet crossed, advertises a congenital tired feeling. This position not only manifests an attitude of more or less indifference to the work, but shows a low standard of manners.

The following "solution" shows the extent and value of the discovery. Present it to your class in geometry, and when they discover and point out the fallacy you may interest them by telling them about "the three impossible problems" of which this is one, and which not only have never been solved, but which have been demonstrated to be impossible of solution by the principles of elementary geometry:

Let $A B C$ be the angle. Extend sides to E and D . Bisect chord $A C$ in F . With F as a center and $E F$ as a radius, draw $G H$. Draw $E F$ and extend to cut $G H$. In a similar way draw $D G$. From points of intersection G and H draw $G B$ and $H B$. These lines cut the arc $A C$ into three equal parts and therefore the angle $A B C$ is trisected by the lines $G B$ and $H B$.

Proof. Draw the parallelogram $E I$, and bisect it with the line $J K$. Since K is the middle point of the chord $A I$, the line $B G$ bisects the arc $A I$ in L .

Similarly, draw a parallelogram with $D C$ as one side and $L C$ as another, bisect it and thus having proved $A L$ equal to $L I$, also $C I$ equal to $L I$, it is evident that the three are equal.

A New Game.

"Come, let us play a new game," said Tom. "I will give you some words and we will each write a story about them." Here are the words—girl, boy, dog, basket, woods.

This is Mary's story:—

"One day a little girl and boy went to market to buy some meat; they went through the woods and took their dog Rex with them. When they bought the meat they put it in the basket and made Rex carry it home."

Here is the story Tom wrote:—

"Once upon a time a boy and girl went to take some cake to a poor old lady who

lived in a little house at the edge of the woods.

"Her dog came out and barked at the children, but they threw him a small piece of cake from the basket, and then he was glad to see them and wagged his tail."

What kind of a story could you make from these words? Pony, boy, lady, lost, woods, dark, \$5, home.

Try this game; you will enjoy it.—
Laura R. Smith, in Primary Teacher.

Wrong End First.

We are told that a certain member of an institute once asked an instructor why it was that all the large rivers ran through cities. The instructor might have gone into an elaborate explanation to show that always in nature there is a tendency to satisfy demands which are made upon her, and so the thirst of the great number of people in the crowded city would have a natural attraction for the water in the river, and although this attraction would vary inversely as the square of the distance, yet it would be enough to cause the bank next to the city to be worn away faster than the opposite bank. Thus the river would in time be bent from its course till it passed through the center of the city, where the thirst-attraction would be equal in all directions.

Such an explanation of this wrong-end-first assumption would be in keeping with many explanations which have been given in the past where men have sought to understand natural phenomena.

Even in many common experiences of the present day we take a wrong-end-first view of matters. We say we suck the cider up the rye straw, while we know that it is the unbalanced force at the other end of the straw that forces the cider up.

The great error of the ancients was that they put words and general ideas first and from these deduced the so-called facts of physical science. They would try to

prove that the world was perfect by reasoning as follows: "The bodies of which the world is composed are solids, and therefore, have three dimensions; now three is the most perfect number; it is the first of numbers, for of one we do not speak as a number; and of two we say both; but three is the first number of which we say all; moreover, it has a beginning, a middle and an end." Such argument seems ludicrous, and yet it is a good example of the wrong-end-first kind of argument used by the great Aristotle himself.

We often mistake effects for causes. Ask any mixed audience of good average intelligence what causes the chest to expand when we inhale the air. It is a little surprising how many will say that the air entering the lungs is the cause. This is a wrong-end-first idea. Of course, when we stop to think of it, we know very well that we lower the diaphragm and elevate the ribs, thus first enlarging the chest, and then, as a result, the air is pushed in until there is equality of tension within and without the lungs.

The same error often is found in reference to the draught of air in a stove. We say a chimney does or does not draw well. This term may be all right if properly taken, but too often the thought is that some agency in the chimney pulls air through the stove much as a rope might be pulled through. The ascending air in the chimney does not, rope-like, drag the air from a room through the stove. When the air in the chimney is heated it expands and so displaces a greater weight of air than it itself weighs. Consequently it is buoyed up and ascends. The air in the room is forced, not drawn, after it, in the effort* to establish a density within the chimney equal to that outside.

*So persistent are ideas based on the wrong conceptions once prevalent concerning physical phenomena that Mr. Culler unconsciously uses this wrong-end-to phraseology even in discussing the subject, representing the air as making an effort to accomplish an end. This is like the old statement "water seeks its level." Inanimate matter does not seek anything, and makes no effort to do anything. Matter never moves until it is either pushed or pulled.—EDISON.

A similar error is noticed in the way some people talk about lifting-pumps. They speak of sucking the water up. The term suck may be all right, but here again the thought often is that the sucker is pulling the water up through the stock. In fact, all the sucker does is to lift the air off the portion of water within the pump stock, and the air pressing upon the surface of the water outside pushes the water up after the sucker, because water, like any other matter, moves in the direction of the greater force. If the pump is well made and the sucker fits perfectly, then the water will be pushed up after it to a height of 34 feet, if the barometer at that time shows a column 30 inches high, but, no matter how hard one may pump, the water cannot be "sucked" any higher.

The rising of liquids through glass tubes and straws by the suction of the mouth is subject to the same explanation as that for the lifting-pump and is liable to the same wrong-end-first ideas.

We also at times get things wrong end first by assuming that they are what they seem to be. It seems that gravity is a pull of the earth upon bodies of matter, but it is highly probable that this is one of our wrong-end-first conceptions, and weight results from a pushing and not pulling toward the center of the earth. We have discussed this fully in the "Monograph on Weight" and will not attempt anything further here on this point.

An error of this sort is observed in the expression, "The sun is drawing rain." In the afternoon, in summer time, when the western sky is partly covered with piling clouds, the light from the sun shines through the spaces between the clouds and we see these long, radiating lines below. Some people take this as a sure sign of rain, because, they say, the sun is drawing up water. This is a good rain sign, but for a different reason. The streaks of light and shadow are of the same kind as those seen in a room when

sunlight enters through a crevice and the beam is made visible by reflections from the particles floating through the air.

Relative motions and positions also give rise to many wrong-end-first ideas. There is a good deal of allowance to be made for this kind of error, for the conditions are often deceiving. If a man stood on a frail support out over the water he might sink into the water or the water might rise over him. Under certain conditions it would be very difficult for him to tell which had happened. Of one thing he would be certain: the surface of the water is over his head.

We often make mistakes in motions. A common one is the motion of a train on which we are riding, in reference to another train on an adjacent track, or, if the road is very smooth, we may get the unpleasant sensation that the train is standing still and the trees, stumps and fences are moving rapidly by.

There are many people yet who believe that the earth is standing still and all the heavenly bodies are revolving around it. Those who rely only on the general appearance of things could not well have any other idea. It is only when one can understand the observed results which follow upon the motion of the earth upon its axis and around the sun, that he is compelled to admit them as facts. The clearest proof that the earth does revolve about the sun is the aberration of the light from the fixed stars. This is supposed to be too difficult for elementary study, but it isn't. We do not discuss it here for it would lead us too far from our subject.

Gradually we have been getting things turned right end first, and as fast as this has been accomplished we have been able to take confident steps in advance. As long as any fact is explained on a wrong-end-first theory, progress in that direction is blocked.

We are now entering into the great realm of ether. Its wonderful possibilities and deep secrets lure us on. We shall get many things wrong end first and a few generations hence will refer to us as the ancients and will laugh at some of our explanations, while they will be glad, as we are now, for that innate desire which has always been a spur to advancement in science—the desire to know and explain.—A. Culler, in *Ohio Ed. Monthly*.

A Bright Little Magazine.

Do you know the magazinelet called the *Philosopher*, published from the log cabin in Wausau, Wisconsin? It is edited by Mr. William Ellis, familiarly known among his friends as "Bill" Ellis, and he is an exceptionally vigorous writer. The matter which makes up the little monthly is both keen and clean. It might be worth your while to send for a copy and get also the announcement of fine books issued from "the sign of the green pine tree." Here are two short articles from a recent number which show the style:

A JUST JUDGE AND UPRIGHT.

Down at Janesville they have a new city hall, and an ingenious municipal judge, who is just as up-to-date as the building. Any man can administer the law. It takes a wise one to administer what isn't. Solomon did no better in the famous case of disputed maternity, than Judge Fifield did the other day in a plain case of disorderly conduct.

In Janesville boys are not materially different from boys anywhere else, although there seems to be a difference in judges. What Mulvaney inaptly miscalled an unwashed limb of Satan conceived the rather brilliant exploit of setting fire to some boxes in the sleigh of an inoffensive old man then in town, and proceeded to put his plan into execution. The police in Janesville are not possessed of that broad sense of humor which takes in such uproarious fun as this, and so they inconsiderately gathered the young lad into the bosom of his constitutional fathers, and presented him the next morning at the

highly polished and elaborately ornate red oak bar where his honor, Judge Fifield, makes his diurnal assessments upon the excess of the previous day's joys.

But Judge Fifield is also a man and was once a boy. It takes that combination to handle the juvenile problems that get into the police court. Anybody can say "ten dollars and costs." I could do that myself. But it takes a judge who can remember that he was a boy and realize that he is a man, to touch the juvenile offender at the right spot. Judge Fifield saw that if he fined the boy the punishment would fall on his father—who was not within the jurisdiction of the judicial wrath. He also saw that to send the boy to jail would be bad for the boy and therefore bad for society. As he pondered over the case the grim bars of the steel-locked jail, and the clogged cobwebs of judicial precedent faded away, and out of the dim vista of the past there rose an ancestral woodshed, and the gentle swish of a paternal razor strap, and from a voice long stilled there came the firm but loving assurance, "my boy, I am doing this for your good." Who of us has not heard that voice—and doubted—at the time. But, the judge remembered the woodshed, and looking from that to the large gold seal on the official confirmation of his well earned honors, he could not but feel that the domestic razor strop as a factor in social development had fallen into undeserved disuse.

He fined the boy ten dollars and costs, which was ten dollars more. Then he sent for the boy's father, and suggested that in his judgment what the boy needed was a good, sound, old-fashioned thrashing; a real session in the woodshed or behind the barn, with none present to molest or make afraid. He intimated that, the court being opposed to excessive punishment, if it were brought to the judicial notice in a perfectly satisfactory manner that this paternal duty had been generously fulfilled, the twenty dollar score then on the books would be marked off, and the slate would be clear. The grateful parent saw no easier way to earn twenty dollars, the boy arose from his tribulations with a wholesome respect for Janesville justice, and the judge went home feeling that a time honored institution had been restored to its lost place—and everybody was happy forever after.

THE COAL FAMINE.

The conditions which have existed in respect of the fuel supply during the past month are almost beyond discussion. The superlatives have all been used, and the supply of execration and abuse is really about as exhausted as the coal supply. It is a situation that accentuates the infirmity of language. The Germans have the advantage of us. They make 'em as they go along. They can call a man a *schurke*. If that doesn't feaze him they can call him a *verachtlichschurke*. If he stands for that they can suggest that he is a *verdorbenverachtlichschurke*. When that gets tame they can insist that he's a *beschonutzenverdorbenverachtlichschurke*. In the course of a fifteen minute conversation a German of ordinary verbal fluency can thus explain with some degree of explicitness, just what he thinks of the other fellow. In English, when a man becomes thoroughly in earnest, his resources in the way of parliamentary language are exhausted in about forty-five seconds, and profanity is his only resource. The coal famine has passed the point where profanity is any relief.

If it were a calamity in any manner arising out of natural necessity, it would be met with some measure of resignation. But for the people of a nation which has supposed it was free and independent to find it grasped by the throat in the hands of a gang of conscienceless scoundrels and held up for gain at the point where life is involved, is so appalling that we have not yet found our bearings.

The most ominous element of it all is the apparent calm of the people. It is probably the quiet which precedes the storm. The people realize that the captains of privilege have the lawmaking power in their own hands, and that any real relief is impossible. It is undoubtedly to a realization of this fact that the present widespread inaction is due. That the powers which are now so shamelessly recreant to the trust which reposes in them will be called to an account they will understand there can be no doubt. The plutocracy of America is forever killing the goose that lays the golden egg with such patience and fecundity. It is fortunate for the people that their utter helplessness in the grasp of the inexorable few

has been exposed to their gaze. It bodes ill for the inexorable few. A wrong is always righted when it gets bad enough.

Problems in Lumber Measure.

FROM ARITHMETIC IN THE COMMON SCHOOL, BY
S. Y. GILLAN. COPYRIGHTED.

The chief educational value of problems in lumber measure, fencing, laying of sidewalks, etc., is that they cannot be solved by formal rules, but compel clear thinking on the part of the pupil and the teacher. Unfortunately this fact makes them somewhat distasteful to many school keepers.

An incidental advantage is that such problems have a "practical" flavor. The teacher should not, however, deceive himself by thinking that there is really much of the practical in these or any other problems, in the sense that the experiences of life will call for similar work. Just as the banker uses interest tables which reduce the matter of computing interest to the simple process of addition, so the lumber dealer lays upon the board, plank or timber, a ruler especially constructed for his use, containing separate rows of figures for the various lengths of lumber; the sum of the board-feet in a number of pieces is thus determined by simple addition. About the only parts of arithmetic that are sure to be needed for use in actual business are ADDITION, *Multiplication*, Subtraction and Division; and the relative "practical" importance of these operations is approximately indicated by the type in which the words are printed. Even the accomplishment of rapid and accurate adding is becoming less important through the development of modern business appliances, for in large commercial houses most of the adding is done on machines "too stupid to make a blunder" and which turn out results as mechanically as a coffee-mill or a corn-sheller.

But although John may not be acquiring much that is usable in solving lumber problems, yet if his father thinks he is, that fact is a *practical* gain, for it insures the incentive that comes from encouragement at home.

First teach the names which indicate the various forms of lumber as it is found in the lumber yard and its common uses when built into structures. The following outline will be useful:

KINDS OF LUMBER.

Dimensions are indicated in inches. The lengths are usually 12, 14, 16, 18 or 20 feet.

FORMS.

USES.

Timbers, 6x6 or larger.

Sills, timbers laid horizontally on top of a foundation wall to support the joists and studding.

Beams, timbers in a horizontal position usually supported at the ends only.

Planks, 2 to 3 inches thick and 6 inches or more in width.

Joists, planks set on edge to support a floor. Planks are also used for heavy flooring, as in barns, bridges and sidewalks.

Scantling, 2x4, 3x3, 3x4, or 4x5.

Studding, scantlings set upright, to form the frame-work of a wall and usually resting on a sill.

Stringers, scantling used to support a sidewalk, or forming the horizontal parts of a fence.

Rafters, scantling supporting a roof.

Boards, one inch thick and of various widths.

Flooring, one inch thick, planed on one side, and "matched" or tongue and grooved, 2 to 6 inches wide.

Siding or weather boards, $\frac{1}{2}$ inch thick at one edge, $\frac{1}{4}$ inch at the other, 6 inches wide.

Sheeting, boards nailed to studding or rafters.

Fencing, boards six inches wide used for making fences.

Barn Siding, boards, usually in a vertical position forming the outside surface of a barn.

For making floors and wainscoting.

For the outside of houses, the edge of each board lapping over the one below.

II.

The unit of lumber measure is the *board-foot*, which is one foot wide, one foot long and one inch or less in thickness.

A board-foot may be any shape. When lumber is 12 inches wide it is convenient to think of the board-foot as having a surface one foot long and one foot wide. Any 12-inch board contains as many board-feet as there are linear feet in its length.

When lumber is 12 feet long it is convenient to think of the board-foot as one inch wide and 12 feet long. Any 12-foot board contains as many board feet as there are inches in its width.

Get the two facts above noted clearly in mind and they become convenient standards of measure by which all ordinary problems in measuring boards may be determined mentally.

PROBLEMS.

Determine the number of board-feet in each board in this list:

	Length.	Width.	Length.	Width.
1	14 ft.	16 in.	4	14 ft.
2	18 ft.	10 in.	5	13 ft.
3	16 ft.	15 in.	6	15 ft.
				10 in.

SOLUTIONS.

(1) Twelve inches of its width contains 14 board-feet. The remaining 4 in. contain $\frac{1}{3}$ of 14 board-feet or $4\frac{2}{3}$ board-feet. Total $18\frac{2}{3}$ board-feet.

(2) Each inch in width contains $1\frac{1}{2}$ board-feet. Total 15 board-feet.

(3) Twelve feet in length contains 15 board-feet. The remaining 4 feet, $\frac{1}{3}$ of 15 or 5 board-feet. Total 20 board-feet.

(4) Twelve feet in length = 19 board-feet. Two feet in length = $\frac{1}{6}$ of 19 or $3\frac{1}{3}$ board-feet. Total $22\frac{1}{3}$ board-feet.

(5) The width is $\frac{3}{4}$ of a foot, hence $\frac{3}{4}$ of 13 or $8\frac{3}{4}$ board-feet.

(6) $1\frac{1}{4}$ of $10=12\frac{1}{2}$ or $\frac{5}{8}$ of $15=12\frac{1}{2}$.

Let many similar problems be solved in both ways as in (6) using twelve feet of length as the unit of measure, and then using one inch in width as the unit. Soon the pupils will be quick to see and use the simpler of the two methods in any particular case.

In determining the board feet in dimension stuff let it be thought of as reduced to one-inch lumber (without waste of sawdust) and then compute as above. Thus:

How many board-feet in a stick of timber 8x10 and 14 feet long?

Solution: The stick is equivalent to 8 boards 10 inches wide, or one board 80 inches wide; the first 12 feet contains 880 board-feet, the remainder $\frac{2}{3}$ of 80 or $13\frac{1}{3}$ board-feet. Total $913\frac{1}{3}$ board-feet.

A stick 20 ft. long and 9x10 in.?

Solution: $9 \times 10 \times 1\frac{2}{3} = 150$.

How many board-feet in 32 planks $2\frac{1}{2}$ in. thick, 15 in. wide and 16 ft. long?

Solution: $32 \times 2\frac{1}{2} \times 15 \times \frac{1}{12} = 1600$.

III.

Much interest may be awakened by having the pupils compute the amount of lumber necessary to build a very simple structure. For example, let us build a house 12×14 feet and 16 feet high to the eaves. If we make the sills out of 6×6 dimension stuff, how many board-feet will they contain? Answer 3×52 or 156 board-feet. Where do we get the 3 feet? The 52 feet?

Four corner posts 4×4 will contain

$48 \times 1\frac{1}{2}$ or 64 board-feet. Explain where we get the 48 and the $1\frac{1}{2}$.

How many 2×4 studding will fill each end if set two feet apart? The boy who speaks first and afterward performs what may by courtesy be called his thinking will say 6. A more thoughtful one, remembering the two corner posts will answer 4. But those who see in the mind's eye the structure they are estimating will say 5. Teach that when we speak of posts, studding, joists, rafters, etc., as so far apart we mean from center to center, except that in case of the corner posts we measure from the outside. How many studding will fill each side, seven, five or six? Shall we make the joists 12 feet long or 14 feet long? Which way will make the steadier floor?

What name is given to the studding as it is found in the lumber yard? What does the lumber dealer call the joists? See section I above.

If we let the eaves project 10 inches and have the ridge of the roof four feet higher than the eaves it is evident that we must get 16-foot scantling for the rafters. Why? [$6^2 + 4^2 = 52$; and the square root of $52 = 7.2$.] How many scantlings will be required if the rafters are placed 2 feet apart? Answer 8.

Around the top of the studding we will place a one-inch board or scantling 4 inches wide and spike it down to the scantling. Such a piece is called a plate. The rafters will rest upon it. Between the two rows of rafters at the ridge we will place an inch board six inches wide, and call it a ridge-board. Compute the board-feet in the plates and ridge-board.

The problems above, simple as they are, will require thoughtful work on the part of both teacher and pupils, and they furnish an excellent drill in constructive imagination, the power of visualizing, imagining or picturing in the mind the things dealt with. Some principles are illustrated that apply also in fencing prob-

lems. For example: (a) When a number of posts stand in a row there is one more post than the number of spaces between posts. (b) When we set posts around a space in a circuit, no matter what the form, the number of posts equals the number of spaces. (c) An even number of posts in a row gives no middle posts, but when the number is odd there is a middle post—a fact worth noting in case a cross fence is to be built.

Are Business Men Opposed to Vertical Writing?

Occasionally the announcement is made that business men generally are opposed to vertical writing, but thus far we have not noticed that any business man whose opinion has been quoted has given any valid reason for his opposition to this system of penmanship, and the preference or personal whim of a business man is of no more consequence than that of any other man. It is a mere matter of taste. In a recent number of *Intelligence* is the following suggestion in explanation of the much advertised hostility of business men to vertical writing:

We have very slight faith in the statement that business men object to clerks who use the vertical system. This statement when made can generally be traced to some teacher in a commercial school. As a class such teachers are strenuously against the vertical system. The reason is very clear. The simplicity and comparative ease with which it can be mastered tends strongly to reduce the importance of their own calling. They oppose vertical writing strictly on "business principles," without any regard to pedagogical or humanitarian considerations.

If it were a fact, as we do not believe it is, that the business world disapproves of vertical writing it would still be the bounden duty of the schools to adopt and teach it. Ease in learning, legibility, speed, absolutely every argument but custom, in favor of it; that is, as a system for children to learn. Of course no one advocates that adults or young people

should work to acquire new writing habits. Nor is it wise for teachers to labor to make their pupils acquire a style too rigidly and literally vertical. Allow latitude but hold to the vertical standard as the ideal. Don't allow the copy-book or the writing teacher—even if you yourself are that teacher—to be a tyrant.

The judgment of such men as Supt. Van Sickle of Baltimore, and Supt. Cooley of Chicago, ought to outweigh the adverse judgment of the whole business world on this question, while the judgment of the commercial schools deserves no consideration whatever.

The Editing Craze.

Probably the greatest craze in the publishing business to-day is the editing of the texts of the classics, especially of the English classics.

It has become customary for almost every instructor to edit the text of any classic he may be teaching. He may have a pet theory as to how the subject should be taught. But it may not occur to him that every teacher has his own method; he may adopt a few, a very few, of the general principles of other instructors, but his method, in the main, must be his own if he is to be anything more than a mere machine. Or, this editing instructor may think that he has new facts concerning the author's life and a new clue to his art. It is very seldom that he has. It is not very gratifying to open an edited text of one of Shakespeare's plays and find in the introduction that the editor laments the fact that so little is known about Shakespeare's life and then fills ever so many pages with the most absurd and extravagant theories and suppositions concerning him. People ought to be fined for continuing to write about Shakespeare, especially for trying to say something new about him. Lowell apologized for writing about him; that was well-nigh forty years ago; apologies should no longer be accepted. And, again, the editor may have an idea that the text has not been fully explained, or that the author's ideas do not agree with

his; so he amends the text by reading some of his own thoughts into it.

The many publishing houses are also the cause of increasing the number of these edited texts. Of course, they must have something to print; so they send invitations to teachers all over the country asking them to contribute to an edition of some author's works by editing some of them. After this edition has ceased to attract the attention of the public by its bewitching title and after its novelty in teaching the subject has exploded, another forthcoming edition with a still more fanciful title is announced.

Let it be distinctly understood, however, that this does not mean that the English classics do not need editing. These edited texts have done much to spread the desire for good literature. And there is still room for good, scholarly, systematic, and discriminating editing. There is too much editing done, and two-thirds of what is done is puny, childish, and unscholarly. There is surely not much editing needed in a work like Irving's "Sketch-book," and yet, one finds editions with elaborate annotations. One is not impressed with a sense of scholarship in picking up an annotated copy of "The Lady of the Lake" to find in the notes that "the Seine is the river that flows through Paris, France," and not to find any word of explanation about the historical allusion in the same passage:

" . . . when first thy rein
I slacked upon the banks of Seine."

Equally childish is it to be told that "brooch" means breastpin, and that the "raven" is a bird like the crow. Children who are supposed to be able to read and appreciate the "Lady of the Lake" should know the meaning of such words, and if they do not they should quickly learn where to find the meaning. And what is the most provoking of all is that, wherever a very difficult passage occurs in the text, not a word of explanation is given in the notes.

The edited texts of some of the English classics are occasionally so emendated and expurgated that they suffer painful distortion. This is especially true of Shakespeare's works, and equally true is it that his works should be expurgated for mixed classes, but many passages are discarded that are harmless; affectation, superficial culture, and an assumed sense of modesty find fault with many passages that common sense might let pass by in silence. The great poet, himself, says that nothing is good or bad but thinking makes it so. But the society (or "society") which retires instead of goes to bed, which rises instead of gets up, and which begins to refuse to call even the legs of a table *legs*, but *limbs*, will be offended at many an innocent passage because superficial culture and affectation have decided that such passages are not "nice;" they are "inelegant" English.

Woe worth the tongue, woe worth the taste,
That calls such sense and English unchaste.

Somebody is suffering from this indiscriminate editing and that is the pupils. They should be urged to look up more things for themselves, to rely a little more on their own resources. This should not necessarily be difficult for them; histories, histories of literature, encyclopaedias, reference-books, and dictionaries are plentiful and cheap. It is not to be expected that the average pupil should do any independent thinking—very few people do anything of the kind—or to make original investigations of which one hears so much. But a little consistent thinking and a little more self-reliance would surely do the pupils no harm; but pupils are not expected to be able even to do anything for themselves the way things are "dished up" for them. They do not learn how to find things; they do not learn where to look for them; they do not become acquainted with books as they ought. They should learn how to use books as a means of instruction, discipline, and culture. At the present time this system

of elaborate editing tabulates for them all the possible facts and the slightest information; all they need to do is to cram. But just as little as the road to health is paved with broken sarsaparilla bottles so little is the road to a cultured appreciation of what is the finest, best, and noblest in literature paved with annotated texts and so-called "studies." There is too much reading about literature and not enough literature itself; the straining after novelty and effect and the haste with which everything must be pursued will no longer permit people to read and re-read an author until he has become a part of them and until they can think his thoughts after him.

It might be replied that editing the texts of the classics so coupiously is a great help to the pupils because they have not the time to look up everything for themselves. This may be true, and so much the greater the pity. To-day everything moves at a maddening pace by rapid transit; even education is suffering painfully from it. Haste is the bane of American life and American education. The pupils are crowded with an unnecessary and unreasonable number of branches of study and are turned out of school in the utmost haste. Were they given fewer studies at a time and were they permitted to pursue them with less haste they would be by far the wiser and healthier for it.—E. S. Gerhard, in the School Journal.

Can Your High School Spell First Reader Words?

Some years ago Prof. Frank Hall, of Illinois, sprung a surprise on high school and upper grade teachers by challenging them as to the ability of their pupils to spell first reader words. He selected one hundred words from primers and first readers in common use, and had them printed on slips which were handed out to high school principals as tests. Many high schools and eighth grade classes in the middle west were

tested, and in no case was it found that seventy-five per cent of the pupils were able to make a perfect grade on the list, and in many of them less than fifty per cent were able to do so.

The list is printed below. We shall be pleased to hear from any high school or eighth grade teachers who may make the test, and the results will be published if a considerable number respond. To remove any temptation to conduct the test or mark the papers otherwise than with strict fairness and impartially, and to assure teachers that they need have no reluctance to report the results just as they find them; we promise not to publish names or places, but results only.

The words should be given in sentences or phrases, not in the order of the vertical columns as printed, but across the four columns, thus:

He went to town.

A red flower.

I hoped he had come.

She read two stanzas.

The test should be made in writing and without any previous preparation. The list is as follows:

to	red	flower	hoped
two	read	ant	hopped
too	pail	aunt	where
here	pale	blue	robin
hear	nose	blew	rabbit
see	knows	would	wagon
sea	tale	wood	running
four	tail	haul	water
fore	there	hall	swimming
so	their	fare	which
sew	deer	fair	seem
sow	dear	meet	stopping
by	no	meat	until
buy	know	hour	write
of	new	our	right
off	knew	rains	lamb
I	sale	reins	many
eye	sail	fly's	through
son	bear	flies	threw
sun	bare	bow	rode
any	led	bough	road
ate	lead	boys	rowed
eight	pain	boy's	limb
sum	pane	rose	Wednesday
some	flour	rows	February

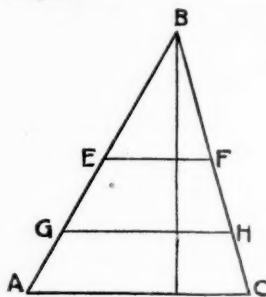
For the Geometry Class.

A triangular field containing 90 acres has one side 160 rods long. Divide it into three equal parts by lines drawn parallel to the given side, and tell how long each of those lines is.

SOLUTION.

Let ABC represent the triangular field, and AC be the side whose length is 160 rods.

Draw GH and E, F, each parallel to AC, and so that they will divide the field into three equal parts.



Triangles ABC, and EBF are similar and their areas are to each other as 3 : 1. Since the areas of similar triangles are to each other as the squares of their like dimensions we have: 3 : 1 :: 160² : EF²

$$\therefore EF = \sqrt{\frac{160^2}{3}} \text{ rods} = 92.376 \text{ rods.}$$

Triangles ABC and GBH are similar, and their areas are to each other as 3 : 2. $\therefore 3 : 2 :: 160^2 : GH^2$; solving this proportion for GH, we have,

$$GH = \sqrt{\frac{2 \times 160^2}{3}} \text{ rods} = 130.638 + \text{rods.}$$

NOTE.—The item, 90 acres, is unnecessary to the solution of this problem, unless we were required to find the width of the two trapezoidal strips, and the altitude of the triangle EBF.—E. M. Mills, in Ohio Ed. Monthly.

People are unreasonable in expecting the public schools to do all the work of character-building. Hence the disappointment in the results. One of the lessons which our self-conceit has to learn is that our public school system, great as it is, cannot be expected to do all the work of making good citizens. It is quite conceivable that any state in the Union might show a percentage of 100 in literacy and still have a fair supply of bribable legislators and purchasable voters.—The Public.

For the Physiology Class.

One of the stones which the builders of physiological theories had rejected bids fair to become the head of the corner. Dr. Sajous of Philadelphia has disclosed to his medical brethren some surprising theories about the ductless glands in the human body. There are two small organs called the suprarenal glands (placed just above the kidneys) which have been thought to be useless, but Dr. Sajous avers, as a result of fourteen years of investigation, that they are of vital consequence. They secrete a substance which, carried to the lungs, takes up oxygen, and forms another substance which becomes mixed with the blood. It is this last substance, called adrenoxin, which does the work of supplying the tissues with oxygen which has so long been credited to the red corpuscles. The suprarenal glands are connected by nerves with a small organ in the brain (the use of which has not been known) which governs them and regulates their absorption of oxygen. Dr. Sajous says that it is on this organ of the brain, called the anterior pituitary body, that all poisons work, and it fights them by stirring up the glands to take up more oxygen. More oxygen means more combustion, the burning up of poisons,—of which the symptom is fever. A strong pituitary enables a man to lay in a good supply of oxygen and destroy disease germs, and now that the use of pituitaries is understood, they can be stimulated on occasion by drugs, so that folks with weak ones may make a better fight against germs. Dr. Sajous considers that what we have been used to call vitality is simply pituitary efficiency. All this is good for the doctors to know, if it is so, and it is interesting anyway. It is always a satisfaction, when a job is found for an organ that has been held to be useless. Some day it may be discovered that the vermiform appendix is a valuable anatomical asset, and that no man who has lost his may reasonably aspire to be president.

That the body should contain an organ the sole use of which is the enrichment of the surgeons who remove it is not reasonable. —Harper's Weekly.

Standing Armies and Aggression.

One hundred and fifty years ago, "Frederick, called the great," King of Prussia, was asked why he had made war on Austria.

"Because I had troops ready to act," he replied cynically.

"For honesty and impudence this brutal declaration has no parallel in history," said Lord Brougham, commenting upon it in London.

It has been very nearly parallel by Chancellor von Bülow in the Reichstag. When asked why the Venezuelan fort at San Carlos had been bombarded he unblushingly replied:

"Because it was necessary to preserve German prestige," as if it could seriously be maintained that an insignificant and turbulent country like Venezuela could assail the prestige of the great German Empire.

This spirit in a nation is the legitimate result of standing armies. Why have 'em unless you use 'em occasionally? We, in our own country, have heard a good deal more lately than we used to that "the way to have peace is to prepare for war." A good answer to that is the fact that we never have been prepared and we have never been beaten. The best troops this or any other country ever had were soldiers who went to the field from civil pursuits. England had all she could do to hold her own with 250,000 professional soldiers against 50,000 sheep farmers in South Africa.

It is time to call things by their right names. Unnecessary war is murder. Most wars are unnecessary. Big standing armies are a standing temptation to big nations to commit outrages on little ones, and to menace the peace of others their

own size. Not one war in ten has had much better excuse than Frederick's war on Austria, but since the beginning of history the strength of nations has been sapped to maintain standing armies, and the existence of the armiea has made excuse for aggression.—Little Chronicle.

A Grammatical Misunderstanding.

MARTHA MICHEL MARTIN, MEMPHIS, TENN.

Dear Marion:

In spite of the busy season I will come to the dance to-morrow night. If I would not come, should you be angry?

Hurriedly,

JACK.

Dear Jack:

Do not come Friday; the party can be postponed. Let me know when it will be convenient for you to come. Of course, I should be angry if you stayed away willingly.

Yours,

MARION.

Dear Marion:

Your letter is a puzzle to me. Why are you going to postpone the party, and who said anything about staying away willingly? Please explain yourself.

Ferplexedly,

JACK.

Dear Jack:

I, too, puzzled over your letter, and I solved it by the rules of English grammar. According to those rules, you said you were determined to come to the dance in spite of the busy season. I was afraid you would do something rash and lose your position, and you know what that would mean to us. You also said, "If I would stay away," and this means, "If I am willing to stay away."

Did I not interpret your note correctly?

Anxiously,

MARION.

Before Jack answered this letter, saying he knew nothing about the rules of grammar, and simply meant that he could get off to go to the party, he was heard to say: "Beware of the grammatical girl."

Reflections of a St. Louis Principal.

Authority must trickle a long way from its source in the board of education before it reaches the principal. In St. Louis, teachers of the first three grades are amenable to seven supervisors, without counting the superintendent and principal; from the fourth to the eighth grades, inclusive, there are five. The educational superstructure is a rather compact and stable affair; not easily shaken, jarred or changed, and yet changes are occurring, as one may observe, rapidly.

The principal is supreme in his field, being amenable to the rules and regulations of the administrative department; he has a free rein and is held responsible for results. He may be a mechanical principal, who says to the man with a new idea, "Don't come to me with it unless you bring an order from the office"; or one who cuts out work and method for his teachers with never a suspicion that that is not his main function. He may teach ponderous definitions to third grade pupils, and make lightning calculators of the little tots who need only to browse along the highway of numbers. On the other hand, he may be a man like the late Charles L. Howard, who has ideas to work out, who studies the children, their capacities and tendencies, and realizes the course of the orderly development of their faculties. According to the superintendent, there is room in these schools for both kinds. It is very much in the air not to be a back number. In nearly every school in this city there is something to be proud of, while in many others there are features which at least do credit to the system. "There is not a mechanical school among my whole lot," said an assistant superintendent. Educators are not agreed in their definition of machine methods and processes. Machine teachers and drill masters, like

the milk-sickness of long ago, are always in the next town or county.

Some drill is necessary, and there are many forms that must be mastered; but the teacher behind this work must be watchful of the effect upon the child's interest and freshness, and desist the moment these begin to wane. But the mechanical teacher does not do this; she pushes repetition to the deadening point.

A principal should stand for something. It is neither expected nor desired that his ideas should sink into that common level of mediocrity from which there is usually no rescue. One may float with the current, grinding out percents and averages, doing his work conscientiously, carefully, faithfully, with never a care for throbbing, burning questions of the new education, saying, "The old ways have made the world what it is, and they are good enough for me." When there is a requisition for averages, he shows up well; he never thinks it possible to make two blades of grass grow where only one grew before; the blade that belongs there is the only one he wants—and he gets it.

Behind tables, and sums, and maps, and compositions the progressive teacher sees the mind and the growth, and the character that are forming under their influence. These to him are the great things, the end and aim in education; the others only an imperfect means for their attainment.

There are many supervisors and much supervision in all large systems of schools. There is much work in harmonizing, instructing and leveling upward necessary, and there seems no other good way to do it. Supervisors are rarely tied up to method; as soon as they become so they should be reduced to the ranks. They have thought out some good things, and have experimented until they know them and can do them. They will change them after a while, when they find some-

thing better. Everything moves; opinions, creeds, even this lovely planet; the teacher gets the benefit of trying the new thing, and all the educational impetus it contains, so is all the better prepared for the next new one when it comes along. But the supervisors are good teachers; there is rarely an exception to this; their selection to their posts was because of this quality; their work is an inspiration to teachers and a means of making a good public school that the principal finds invaluable.

I have had four supervisors this week, and I have seen more than one glassy eye after the inspection of the teachers' work. Each supervisor, of course, thinks his particular line the one important thing. He would not be fit for his job if he did not. I sympathize in his enthusiasm, but must not forget that there are others. I don't like glassy eyes, and blanched cheeks and livid lips; they are unpedagogical, they are kill-joy remedies that too much resemble recovery through amputation. "I'm 'agin' every one of them, on every count." They do not belong in the streak of sunshine where smiling faces and happy voices conduce to a proper educational atmosphere; the little world where love makes all labor light.

I wonder how the whole educational problem looks from the standpoint of the teacher. Her point of view is important to the principal. Do we ever forget that she is an individual with likes and hates and rights and preferences, and prejudices, and good qualities as well as bad, and think of her only as being a part of that great machine we are running? If so, another supervisor is needed; one who can give to the principal the human element without which there can be no good schools. The supervisors we have, let us retain. They shoulder no inconsiderable part of the principal's burdens; their attitude is one of helpfulness and co-opera-

tion. The schools of no large system can find their best expression without them. The teacher needs them, the principal needs them, and they are hand and arms and eyes and ears to the superintendent. But there will yet be a day in American schools when teachers will come to the work of the teacher fully equipped to do *all that* is now required in a curriculum without the aid of a specialist.

Affect and Effect.

Fill each blank with the proper verb or participle (affect, affecting, affected; effect, effecting, effected.)

- (1) We used home material, thereby —
- (2) The socialists aim to —fect radical changes in the conduct of affairs.
- (3) A larger or smaller vote cannot —fect the net result.
- (4) The character of the weather is —fected by altitude.
- (5) An —fecting scene occurred when the widow parted with her only son.
- (6) Mr. Strong's courteous manner —fected more good than could have been produced by harsh words.
- (7) A thousand arguments could not —fect the firmness of the governor's conviction.
- (8) Skilfully told falsehood will sometimes —fect the judgment of sound-minded persons.
- (9) No great reform can be —fected without great patience and persistent effort.
- (10) This appalling calamity did not —fect his calm trust in an overruling Providence.
- (11) Mr. Williams's suave manner did not —fect as many persons as did the plain arguments of his opponent.

Quotation Marks.

I have long used this device in teaching the use of quotation marks. It works like a charm. Children all give attention. I then ask who would like to tell me something that the others cannot hear. John's hand is raised. He is called up and whispers in my ear, "We are going sliding to-night." I immediately write one of the following forms on the board:

John said we are going sliding to-night.
We are going sliding to-night said John.
We said, John is going sliding to-night.
John said that they were going sliding to-night.

The children put in the punctuation marks and change the small letters at the

beginning of the quotation to a capital. They often make the mistake of writing with a capital the first word of the second part of the divided quotation. This work is greatly enjoyed by pupils. When their own words are written on the board, they readily understand why their names are not embraced within the quotation marks. They thus thoroughly learn their use and great is the amusement when a pupil errs by marking the sentence as if the author's name were a part of his own quotation.—
Agnes M. Kennedy in *Intelligence*.

Curiosities and Quips

[Webster defines a curiosity as "that which is fitted to excite or reward attention." There is a legitimate place for quaint and curious lore in the education of the young. A wise use of the matter which will appear in this department will prove altogether wholesome though part of it may at first seem unrelated to any systematic body of knowledge.]

Crow Roost Located.

Mitchell, Ind., Jan. 17, 1903.

There is a crow roost about two miles north of this place. It is undoubtedly one of the largest in the country. Some of the farmers living in the vicinity claim that there are a million of them. It is not probable that there are nearly so many, but I should think there are not fewer than one hundred and fifty thousand crows in this colony.

As they begin to gather in the evening, the number is so great that they often obscure the light of the sun in their flight. Several attempts have been made to drive them from this place, but without success.

It would be difficult to convince some of the farmers near this roost that the crows perform a great service for plants. An adjoining field of corn which a few of them visit before going on their daily flight, looks as a field does after having been given over to the hogs.

Passengers on the south bound Monon train, which reaches this place about 5 o'clock p. m., may see a few thousand of these crows if they will look to the east a

few minutes before reaching Mitchell.—
W. E. Stipp, in Teachers' Journal.

Unconscious Poets.

Some writers unconsciously frame their sentences in such form as to give them a rhythmic flow or metric structure. The following is a remarkable illustration of this; it is a verbatim extract from the well-known romance Lorna Doone, and is not in any way changed except to print it in the form of verse:

All the air was flat with snow,
All the air was thick with snow;
More than this no man could see,
For all the world was snowing.
Ever and again the tempest snatched
Little whiffs from the channeled edge,
Twirled them round and made them dance,
Over the chine of the monster pile,
Then let them lie like herring-bones,
Or the seams of sand where the tide has been.
Not a sign of life was moving,
Nor was any change of view,
Unless the wild wind struck the crest,
Of some cold drift and bowed it.
Then I thought of promise fair,
Such as glowed around me
Where the red rocks held the sun
When he was departed,
But as evening spread across them,
Shading with a silent fold,
All the color stole away,
All remembrance waned and died.

The Palindrome

Sat a gray and thoughtful soldier
By his summer Kansas home.
Came and spoke his freckled nephew,
"Uncle, what's a palindrome?"
Smoked the soldier then in silence,
Wistfully he looked afar,
Then at last he spoke and answered:
"Raw was I ere I saw waR."
Spoke the nephew: "War and armies
Threaten not our Kansas home;
Do not fight those battles over—
Tell me, what's a palindrome?"
Slow replied the grizzled soldier,
"Raw was I ere I saw waR.
Read it backward, read it forward,
That is what the words are for."
"Life's a palindrome, my nephew—
You may run it either way;
Life from either age or childhood,
Comes and goes from clay to clay."
It is but a funny riddle
With a simple thread of truth:
We can read it up from childhood,
Then can read it back to youth.
Honest acts and honest thinking
Pin your future faith upon;
Working with your best endeavor,
Let

"No evil deed live oN." —Ironquill.

Numerical Necromancy.

Write the number of your living brothers.

Double this number and add 3.

Multiply by 5.

Add the number of living sisters.

Multiply by 10.

Add the number of deaths of brothers and sisters, and subtract 150.

Beginning at the right, the first figure indicates the total number of deaths of brothers and sisters; the next figure the number of living sisters, and the next, if there is a third, the number of living brothers.

A Modern Love Song.

In the state of Mass.
There lives a lass
I love to go N. C.;
No other Miss.
Can e'er I Wis.,
Be half so dear to Me.
R. I. is blue
And her cheeks the hue
Of shells where waters swash;
On her pink-white phiz
There Nev. Ariz.
The least complexion Wash.
La.! could I win
The heart of Minn.,
Id. ask for nothing more,
But I only dream
Upon the theme,
And Conn. it o'er and Ore.
Why is it, pray,
I can't Ala.
This love that makes me Ill?
N. Y., O., Wy.
Kan. Nev. Ver. I
Propose to her my will?
I shun the task
"Twould be to ask
This gentle maid to wed;
And so, to press
My suit, I guess
Alaska Pa. instead.

—Brooklyn Eagle.

Progr'm.

Many persons who ought to know better persist in mispronouncing some of the commonest words in the language. A school boy explained his tardiness one morning by saying that his father was away from home, and had sent him a telegraphic dispatch to let him know that he would be a day or two late in returning, as he had accepted an invitation to take part in a patriotic celebration. The boy had stopped to read the telegram.

The explanation sounded a trifle "fishy"

to the teacher. "What is the progr'm of the celebration, Tommy?" she asked.

"I don't know, ma'am," he replied. "Papa didn't say in his telegr'm."

There was a twinkle in the boy's eye, but his face was preternaturally grave, and after eyeing him a moment suspiciously, the teacher sent him to his seat. Later on she looked in her dictionary.—Youth's Companion.

The rich man is the trustee of humanity. In this way humanity's money is kept profitably invested, instead of being spent for food and drink and other frippery.—Puck.

Miss Nora once wore a fedora
As bright as the light of Aurora,
A goat passing by
Said when it caught his eye,
"I'd adore a feed o'er a fedora!"

"Manywhere."

Baron Avebury, the scientist who in 1865 introduced the words "paleolithic" and "neolithic" has coined another new word. In a recently published work entitled "The Scenery of England," referring to the northern districts he says, "Rocks occur manywhere." It seems remarkable that a word so convenient should not have been introduced earlier. It will doubtless appear in the next editions of the dictionaries.



Readings and Recitations.



Only A Leaf.

EMELIE A. SALISBURY.

Only one of the million leaves
That hung on a spreading tree,
Only to cling till the buffeting winds
And frosts should wrench it free.

But it helped to build the stately trunk,
And to spread the branches wide,
And under its shelter a colony
Of insect lives might hide.

It kept the rain from the hang-bird's nest
Till her young ones five were grown,
And where its shadow touched the grass
A starry campion shone.

Only a leaf on Ygdrasyl's bough,
But the tree has need of thee,
And, wanting thy best, it will surely fail
Of its utmost bourgeonry.

Drink deep of the life-tree's pulsing sap,
And render it up again
In strength, and beauty, and helpfulness,
For the weakest within thy ken.

The Cowatcher.

Cast your eagle eye on me—
Leaders there must always be.
I have such a massive brain,
I can stand the tug and strain.
See the engine and the train
As they meekly follow me.
Leaders there must always be.

It's a part of nature's plan
That I occupy the van.
Born to rule, and born to lead,
Born to flourish and precede,

The momentum and the speed
Of the engine and the train
Are the products of my brain.

MORAL.

Those the world has pushed ahead
Thought they pulled the world they led.

They were either fast or slow,
As the world would have them go;
But they never seemed to know
That behind them came the force
That controlled their speed and course.
—Eugene Ware.

The Purse.

My subject is—it might be worse—
For tho' in truth 'tis but a *purse*
Instead of *safe* or *vault*,
'Tis of the kind you ought to own,
And is its worth to you unknown
There's none but you at fault.

This purse insures complete success—
'Twill buy the poor a satin dress,
The starving man a feast.
For wretched outcasts doomed to roam
'Twill buy or build a granite home
Three stories high at least.

'Twill lift the low to high command
And buy the serf a tract of land
Vast as an earl's may be.
In spite of birth and lack of grace,
It bought a splitter of rails a place
In Washington, D. C.

When friends and fortune shall have fled
'Twill buy a crown for Yousuf's head
And furnish Bruce a throne.
'Twill give Leonidas, in fee,
The key to Greece, Thermopylae,
All for his very own.

Whoever has this purse may claim
Wealth, honor, power, name and fame
And owe no man on earth.
This precious purse of which I write
Is PERS-e-verance—Now good-night—
Perhaps you know its worth?
—Floyd D. Raze.

The Disturbers.

Acts 17:6.

They have turned earth upside down,
Says the foe;
They have come to bring our town
Wreck and woe.
To this never-ending cry
Boldly here we make reply:
Yea and no.

Upside down the world has lain
Many a year;
We to turn it back again
Now appear.
Will ye, nill ye, we will do
What at last no man shall rue:
Have no fear.

—Stephen T. Byington.

The Poet's Fatal Lack.

BREWER MATTOCKS.

Apollo, god of song, upon a time
Lent to a poet his most wondrous lyre,
His gift of music, prophecy and song.
Could god give more? To poet more belong?

The poet said—"Now shall I sway mankind,
And like Apollo shall I work my will."
All that Jove's favored son could sing, sang he
Yet failed completely in his minstrelsy!

His prideful look now settled to a frown,
His frown to rage, from singing now he cursed
Until men drove him out. Where, in a wood
He saw divine Apollo. Where he stood

The lambs came to him from their mother ewes.
His gracious presence made all birds to sing.
The lilly-cups responded to his nod.
The maidens left their lovers for the god!

There learned the poet the god's greatest gifts
Go all for nought without the kindly heart.
Apollo's power lay less in matchless art
And more in kindness of Apollo's heart!

The Leisure Classes.

There was a little maid
Who wed a king long, long ago:
Of course the taste that he displayed
Was criticised by folk who know
Just what formalities and things
Are due to beggar maids and kings.

But straight the monarch made reply:
"There is small difference, as I live,
Between our stations! She and I
Subsist on what the people give.
We do not toil with strength or skill,
And, pleasing Heaven, never will."
—The Washington Star.

The Frenchman's Spider and the Fly.

The Spidaire weave hees web one day;
Mees Fly come buzzing long that way;

The Spidaire speak—
And blush her cheek:
"You should not roam
But have a home

Of lace so beautiful, Mees Fly,
It match the jewel of your eye."

Mees Fly she walk jus so;
The Spidaire very slow:
The Spidaire sigh;
She drop her eye,
Turning oblique,
Powdaire the cheek:
Then rapidly her feet she fling;
He *rubber-neck*, she rub her wing.

"Since I long time your beauty know,
I build for you this gran' chateau."

Mees Fly she say:

"I must not stay!

We nevaire met!"

He say: "And yet

I dine with many of your kin;
Let me present myself!—walk in!"

Mees Fly she feel so compliment
To own the house and pay no rent;

Right proud she grow;

An' fond of show

She not believe

He can deceive;

And when the Spidaire stroke her chin
She's captivate and walk right in!

Before she can enjoy the place
Her feet get tangle in the lace:

Entrap is she

Through vanitee!

Then she, too late,

Bemoan her fate.

With flatteree that he supply
The Spidaire always catch the fly.

—Fred E. Brooks.

Correspondence

Ness City, Kansas, April 4, 1903.

Dear Mr. Gillan:

I would like to investigate with you a brief note on page 239 of the March number of your journal. Did you notice the quotation from Edwin A. Abbott, and the illustrations? In the sentence, "Black is a color," the word *black* is the subject of the sentence, *therefore* a noun. Logical, isn't it? In the sentence, "He is a good boy," *he* is the subject of the sentence, *therefore* a noun. Simple, isn't it? In the sentence, "There is where I laid it," the word *there* is the subject of the sentence, *therefore* a noun. How plain it all is!

In the sentence, "John is a black boy," the word *black* limits a noun, *therefore* it is an adjective. Why, certainly, and in the sentence, "This is my hat," the word *my* modifies a noun, *therefore* it is an adjective. In the sentence, "This is John's oldest boy," the word

John's limits a noun, *therefore* it is an adjective. How easy you can dispose of grammar—if you don't care about telling the truth!

I wonder if any man who ever formed a sound judgment believes such rot? Does any one familiar with grammar believe that *he* and *my* are not pronouns? Suppose you were examiner, and some one parsed *he* in the sentence, "He is a good boy," as a noun; would you give him a perfect grade? Suppose you were asked to parse *John's* in the other sentence; would you hesitate to parse it as a noun in the possessive case?

Of course it is asking a good deal to ask you to think of these things and be honest with yourself in answering them, but I wish you would take seven minutes, and do it. Don't tell me what your answers are, but answer for yourself, definitely and honestly. And when you have finished that, let us investigate for a few minutes the dictum that "The use of a word in a sentence determines its classification; i. e. what part of speech it is."

If this be true, the definition for noun is false and no definition; for nouns are usually defined as "name of anything." But the note says a word is a noun *because it is the subject of a sentence*. If the dictum be true, then we must throw out our definitions of nouns and verbs.

But how will you define noun? Surely, we may not limit it to those terms used as subjects of sentences. Shall we include all the constructions of nouns in the definition? Mr. Holbrook illustrates over fifty, and it will be troublesome to include them all. No, *if the dictum be true, it is impossible to define accurately any part of speech*. (Read that over and prove it for yourself.)

Again, if the dictum be true, words cannot be classified at all. For if their classification depends upon their use, then those used *alike* must be in the *same class*; and in, "This is my hat," "This is John's hat," "This is a black hat," the words *my*, *John's*, and *black* must be put in the same class because each limits the noun hat. (See note page 239.)

If the dictum be true, the dictionaries are all wrong; for they classify words entirely without reference to their use or function.

In fact, there is not a valid argument in support of the proposition, not one; while there are a dozen opposed to it. But it is no use to give them, or mention the facts. No grammarian can afford to study facts and then tell the truth. And even so candid an observer as Mr. Gillan can not lay aside his prejudice and preconceived opinion for a moment and apply to this proposition the same tests he would use with a proposition outside of grammar.

Why then do I write this? I have been marking examination papers all day and have seen so much foolishness resulting from such careless teaching that I am disgusted and want to relieve my feelings; and as I didn't have the address of Mr. Abbott or Mr. Patrick, I just blow off on you. Of course I don't expect you to admit the facts in the case, but what do you think of it? Are you "churning buttermilk" in grammar?

Just listen to a rash (!) statement of the case: There is no man living who can classify

words merely from their use in sentences; and there is no word in good use in English that scores of men can not classify without its being used at all—if it be defined. Do you see the point? Yours irritably,

CHAS. B. TAYLOR.

P. S.—That article on "A Rational School System" page 256 et seq., has the most sense and truth in it of any article I have ever read about schools. C. B. T.

To the Editor:

The following solution to the masonry problem in the Correspondence column of your journal for March will give the answer set down in the book as requested by Miss Ella Felsch. The problem is found in Milne's Standard Arithmetic, page 228, and the solution below, prepared by Josie Oslund, 7th grade, 12 years old, has been presented to a practical mason and pronounced the usual method.

A wall 42 ft. long and 15 ft. high= 42×15 , or 630 sq. ft. in the face of the wall. A gate 10 ft. by 10 ft.=100 sq. ft. 630 sq. ft.—100 sq. ft.=530 sq. ft. net.

There are 22 common bricks to the cubic foot for a wall 12 in. in thickness, and 7 additional bricks allowed for each 4 inches in thickness, or 29 bricks to each square foot of surface in a wall 16 inches thick.

$29 \times 530 = 15,370$, the whole number of bricks required. 15,370 bricks \$11.50 per M.= \$176.755 cost of bricks. \$176.755 + \$9.45, cost of scaffold=\$186.205 entire cost.

H. D. HORTON, Hoffman, Minn.

A similar solution was sent by J. C. Schleicher, of Kohlsville, Wis. The rule referred to is approximate only, but is probably accurate enough for practical purposes.

Please solve the following problem by arithmetic:

The hypotenuse of a right angled tri-angle is 125 ft. The perpendicular is 85 ft. greater than the base. What is the length of each side?

GEO. S. PETERS.

Peters, Nebraska.

There may be some arithmetical "rule of thumb" which applies to problems of this form, but if so we do not know it. Life is too short to waste any of it in working under unnecessary limitations. In doing any work always encourage your pupils to use the most effective tool. Don't ask them to shell corn by hand; use a corn-sheller. The tool to use in this case is algebra.

$$\begin{aligned}(85+b)^2 + b^2 &= 15625 \\ 7225 + 170b + 2b^2 &= 15625 \\ 2b^2 + 170b &= 8400 \\ b^2 + 85b &= 4200 \\ b^2 + 85b + (42\frac{1}{2})^2 &= 6006\frac{1}{4} \\ b + 42\frac{1}{2} &= 77\frac{1}{2} \\ b &= 35 = \text{base.}\end{aligned}$$

The Bulletin.

If you are going to Boston and want to go with a party, see the ad. of the Outing Club in this issue.

Send for free sample of our report card, for common school or high school. Our song book is unexcelled; for a sample copy send five two-cent stamps.

C. A. Fullerton of the State Normal School at Cedar Falls, Iowa, published a music book for the public schools about two years ago. It has reached the sixth edition. It costs 30c net. It is precisely what is needed in introducing music into the schools. 26 counties in Iowa, 7 State Normal Schools are using it. Write the author at Cedar Falls.

Men who are looking for employment for the summer will do well to address the Wisconsin School Supply Company, whose advertisement appears on another page. This company is one of the very few concerns engaged in this line that are independent of the school furniture trust, and they offer good territory and liberal rates of commission to agents.

Lessons in Mathematical Geography by S. Y. Gillan, Milwaukee, is a unique presentation of this interesting subject. The work in Mathematical geography as outlined for Illinois, Wisconsin and many of the schools of Iowa and Missouri follows the plan of the book. One superintendent ordered 300 copies for use in his eighth grade. Price 10 cents, or \$1.00 a

One little oasis in the desert of low salaries and brief tenure of office has recently come to view. A teacher has taught in an Iowa district in a schoolhouse just across the road from her home for fifteen years at a salary of forty dollars a month. She was offered a graded school position but the patrons raised the salary to keep her. Other calls are now coming and there is talk of another increase of salary.

Concerning the meeting of the N. E. A. at Boston, July 6-10, the public as well as the teachers should know—

1. That the rate is one fare (plus \$2.00) for the round trip.
2. That ticket extension is to August 31.
3. That there are many points of historic and literary interest in and about Boston.
4. That the facilities for visiting all important places will be adequate.
5. That there are many inexpensive hotels by the sea and at the mountains.

The annual moving day is on with teachers. That is, they are getting ready to move next fall if the desired situation is secured. Some good superintendencies are open, but the chief cause of the changes is the great desire for better salaries on the part of grade teachers. Living expenses have increased from ten to

Exhaustion

When you are all tired out, feel nervous, sleep does not rest, and your appetite is poor, take

Horsford's Acid Phosphate

It will revive your strength, induce natural sleep, improve appetite, and restore nerve power. It strengthens the entire system, curing the causes of Headache, Indigestion and Debility.

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twenty-five per cent. in the last two years and except in a few instances there has been no attempt made to keep the wages at an equal pace of increase. Boards writing for teachers will frequently require strong disciplinary power, good scholarship, ability to teach music part of the day throughout the grades and close the letter with the statement that the salary is forty dollars a month. In many cases it is only thirty-five dollars.

Prof. H. L. Bolley of the North Dakota Agricultural college, received his letter of instruction from the department of agriculture at Washington to proceed to Russia in June and investigate the flax diseases and immune flax. Mr. Bolley goes as the special representative of the department of agriculture at Washington and of the North Dakota Agricultural college at Fargo. The investigation will take him over the greater part of Europe.

Marathon, Iowa, is to have a new school building costing about twenty-five thousand dollars. At the recent school election the people of adjoining country districts voted to consolidate with the Marathon schools and transport their pupils to the town school. This necessitates the transportation of about seventy pupils. E. C. Roberts has been principal at this place one year and is putting the course of study in shape for a more vigorous campaign next year.

Bird-Lore (The Macmillan Co.) for April contains contributions from Florence M. Bai-

ley, Mabel O. Wright, and Frank M. Chapman, who writes on how to study birds' nests. An editorial discusses the various classes of modern nature literature and concludes that attempts to humanize bird characters only emphasize the ease with which one "steps over the border line of fact into the limitless field of fiction."

Among the books in the state list recommended for high school libraries in Wisconsin is JEGI's Syllabus of Human Physiology, published by S. Y. Gillan & Co., Milwaukee. The following comment on the book is from the official list for high school libraries:

"An excellent summary of the essential points of this subject. It contains ample reference to additional information and to discussions in larger texts. The syllabus may be used by teachers and students as a guide to the study of this subject." The book retails at \$1.00. For classes, write for special rates.

Abbott's A Boy on a Farm, by Jacob Abbott, edited by Clifton Johnson, with an introduction by Dr. Lyman Abbott, illustrated, price 45 cents. American Book Company, Cincinnati and Chicago, is intended for third-grade supplementary reading. It is the latest addition to the well known and widely-used series of Eclectic School Readings, and presents two stories of Jacob Abbott in new and attractive form. The ethical discussions and explanations have been largely eliminated, and, thus revised, these once popular stories are admirably suited to hold the interest of young readers and to do excellent work in training youthful instincts naturally and healthfully. The stories have a distinct educational effect, both mental and moral; they teach industry, honesty, and all the manly virtues. The illustrations are numerous and pleasing, and have all been drawn especially for the book.

At the last meeting of the Iowa State Teachers' Association the educational council appointed a committee to investigate the question of teachers' salaries and report at the next meeting. This will be one of the most profitable reports ever given before the council, and it is hoped to have it completed for final action at the next meeting instead of having it up for discussion for several consecutive years, as has been the custom in the past. The fact that Prof. Thomas Nicholson, of Cornell College, is at the head of the committee assures the vigorous prosecution of the work.

President Seerley of the State Normal School is gathering statements from graduates who are teaching and learning from them their actual living expenses and what they can save from the salaries received. He will have some interesting disclosures to make soon. Superintendent Crane, of Marshalltown, laid some very plain figures before his board a short time ago and there is a promise of better things for teachers in that city in consequence.

If you have not been using monthly report cards try this mode of encouraging regular, prompt attendance and diligence in learning lessons. See the fac simile of our card on an-

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A novel trial lasting for several days was held in the law court of the junior law class at the University of Iowa recently. The character, Hamlet, from Shakespeare's drama of that name was put on trial for murder. Other characters from the play and experts on the question of insanity gave testimony before the jury. The result was a verdict of murder and the explosion of the insanity theory. Literary critics and medical experts will continue to discuss the matter and refuse to consider it as settled by this trial, but it suggests an interesting way of treating some of the disputed points relating to characters in literature. It is the purpose to use similar materials for later trials.

Books Received.

We will give the name, publisher and price (if reported to us) of every book that we receive. We will give notice or review of such as space and our judgment will permit. Some of the books in this list will be reviewed in subsequent issues. All volumes are cloth unless otherwise noted. A copy of any book in this list will be sent on receipt of the price.

Some Useful Animals and What They Do for Us, by John Monteith. 232 pages. Price 50 cents. American Book Company.

Laboratory Manual of Physics, by Henry C. Cheston, Philip R. Dean, and Charles E. Timmerman. 128 pages. Price 50 cents. American Book Company.

Galdós. *Electra*. Edited by Otis G. Bunnell. 185 pp. Price 70 cents. American Book Company.

Commercial German, by Arnold Kutner. 404 pp. Price \$1. American Book Company.

Barnes's New Histories of the United States. Elementary History. 360 pages. Price 60 cents. American Book Company.

Barnes's New Histories of the United States. School History. 432 pages. Price \$1. American Book Company.

Beginnings of Rhetoric and Composition, by Adams S. Hill. 522 pages. Price \$1.25. American Book Company.

Botany all the Year Round, by E. F. Andrews. 302 pages. Price \$1. American Book Company.

Augier and Sandeau's *Le Gendre de M. Poirier*, edited by Edwin Carl Roedder. 144 pages. Price 40 cents. American Book Company.

A Boy on a Farm, by Jacob Abbott. 182 pp. Price 45 cents. American Book Company.

Facts and Figures in a Nutshell, by Felix J. Troughton. 110 pp. 50 cents. The Abbey Press, New York.

Goethe's *Hermann and Dorothea*, edited by Arthur H. Palmer. 202 pp. 50 cents. D. Appleton & Company.

The Story of My Life, by Helen Keller. 441 pp. Price \$1.50. Doubleday, Page & Company.

Burke's Conciliation with America, edited by Joseph Rushton. 136 pp. Price 25 cents. Ainsworth & Company.

Jugendliebe, von Adolf Wilbrandt, edited by Theodore Henskels. 87 pp. 30 cents. Henry Holt & Co.

Elementary Chemistry, by Robt. H. Bradbury. 329 and 157 pp. \$1.25. D. Appleton & Co.

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